



UNITED STATES PATENT AND TRADEMARK OFFICE

ITW

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/623,096

07/17/2003

Detlev Marpe

SCHO0151

2856

22862

7590

04/13/2005

GLENN PATENT GROUP  
3475 EDISON WAY, SUITE L  
MENLO PARK, CA 94025

EXAMINER

YOUNG, BRIAN K

ART UNIT

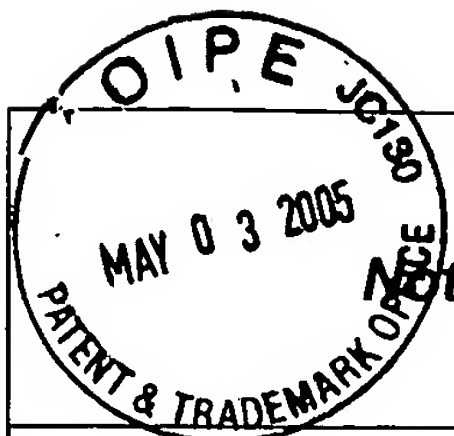
PAPER NUMBER

2819

DATE MAILED: 04/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

RECEIVED  
MAY - 3 2005  
OIP/E/JCMS



Suppl.  
Notice of Allowability

**Application No.**

10/623,096

**Applicant(s)**

MARPE ET AL.

**Examiner**

Brian Young

**Art Unit**

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the IDS filed 8/24/04.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

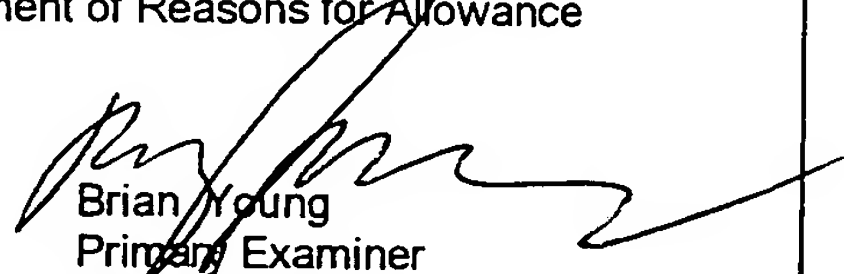
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>8/24/04</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                              | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance             |
|   | 9. <input type="checkbox"/> Other _____   |

  
Brian Young  
Primary Examiner  
Art Unit: 2819



PTO/SB/08B (02-03)

Approved for use through 04/30/2003. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

Application Number 10/623,096

Filing Date 7/17/2003

First Named Inventor Marpe, et al.

Art Unit 2618 2819

Examiner Name Unknown Young

Attorney Docket Number SCHO0151

Sheet 1 of 6

**OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS**

| Examiner Initials* | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|--------------------|-----------------------|---|----------------|
| B                  | A                     | Wiegand, Thomas, et al; "Draft ITU-T; Recommendation and Final Draft International Standard of Joint Video Specification; ITU-T Rec. H.264; ISO/IEC 1449-10 AVC"; 8th Meeting: Geneva, Switzerland, 23-27 May 2003  |                |
|                    | B                     | Wiegand, Thomas, et al; "Overview of the H.264/AVC Video Coding Standard"; IEEE Transaction on Circuit and Systems for Video Technology, Vol. 13 No. 7, July  |                |
|                    | C                     | ISO/IEC 13818-2: 1995 (E) Specification (no month given)  |                |
|                    | D                     | Sullivan, Gary: "Draft Text of Recommendation H.263 Version 2 ("H.263+") for Decision"; Study Group 16 - Contribution COM-999; Study Period 1997-2000 (no month given)  |                |
|                    | E                     | International Organization For Standardization; Organization Normalization; "Information Technology - Coding of Audio Visual Objects -Part 2: Visual"; N4350 (no date given)  |                |
|                    | F                     | Gonzales, C.A.; et al; "DCT Coding for Motion Video Storage using Adaptive Arithmetic Coding"; Signal Processing: Image Communication 2 (1990); Vol. 2, No. 2, pp 145-154; August 1990  |                |
|                    | G                     | Marpe, Detlev, et al; "Adaptive Codes for H.26L"; ITU-T Telecommunications Standardization Sector; Video Coding Experts Group Document; Document VCEG-L13; Twelfth Meeting: Eibsee, Germany, 9-12 January 2001  |                |
|                    | H                     | Marpe, Detlev, et al; "Further Results for CABAC entropy coding scheme"; ITU-T Telecommunications Standardization Sector; Video Coding Experts Group Document; Document VCEG-M59; Thirteenth Meeting: Austin, Texas, USA 2-4 April 2001                         |                |
|                    | I                     | Marpe, Detlev, et al; "Improved CABAC"; ITU-T Telecommunications Standardization Sector; Video Coding Experts Group Document; Document VCEG-018r1; 15th Meeting: Pattaya, Thailand, 4-6 December 2001   |                |
| ✓                  | J                     | Marpe, Detlev, et al; "New Results on Improved CABAC"; Joint Video Team of ISO/IEC JTC1 & ITU-T VCEG, Document JVT-B101; 2nd Meeting: Geneva, CH, Jan. 29-Feb. 1, 2002  |                |

Examiner Signature

B. K. Young

Date

Considered

4/7/05

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

|   |      |                          |               |          |
|---|------|--------------------------|---------------|----------|
| Substitute for form 1449/PTO<br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br>(Use as many sheets as necessary) |      | <b>Complete if Known</b> |               |          |
|   |      | Application Number       | 10/623,096    |          |
|   |      | Filing Date              | 7/17/2003     |          |
|   |      | First Named Inventor     | Marpe, et al. |          |
|   |      | Art Unit                 | 2613 2819     |          |
|   |      | Examiner Name            | Unknown Young |          |
| Sheet 2   | of 6 | Attorney Docket Number   |               | SCHO0151 |

| OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS |                       |   |                |
|---|-----------------------|---|----------------|
| Examiner Initials*                              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
| B   | K                     | Schwarz, Heiko, et al; "Improved CABAC"; Joint Video Team of ISO/IEC MPEG & ITU-T VCEG; Document JVT-C060; 3rd Meeting: Fairfax, Virginia, USA, 6-10 May 2002.  |                |
|   | L                     | Marpe, Detlev, et al; "Fast Arithmetic Coding for CABAC"; Joint Video Team of ISO/IEC MPEG & ITU-T VCEG; Document JVT-C060; 3rd Meeting: Fairfax, Virginia, USA, 6-10 May 2002.   |                |
|   | M                     | Schwarz, Heiko, et al.; "CABAC and Slices"; Joint Video Team of ISO/IEC MPEG & ITU-T VCEG; Document JVT-D020r1; 4th Meeting: Klagenfurt, Austria, 22-26 July 2002   |                |
|   | N                     | Karczewicz, Marta, et al.; "Analysis and Simplification of Intra Prediction"; Joint Video Team of ISO/IEC MPEG & ITU-T VCEG; Document JVT-D025; 4th Meeting: Klagenfurt, Austria, 22-26 July 2002   |                |
|   | O                     | Marpe, Detlev, et al.; "Proposed Cleanup changes for CABAC"; Joint Video Team of ISO/IEC MPEG & ITU-T VCEG; Document: JVT-E059; 5th Meeting: Geneva, CH, 9-17 October 2002  |                |
|   | P                     | Bossen, Frank; "CABAC cleanup and complexity reduction"; Joint Video Team of ISO/IEC MPEG & ITU-T VCEG; Document: JVT-Exxx; 5th Meeting: Geneva, Switzerland; October 2002  |                |
|   | Q                     | Marpe, Detlev, et al; "Final CABAC cleanup"; Joint Video Team of ISO/IEC MPEG & ITU-T VCEG; Document: JVT-F039; 6th Meeting: Awaji, Island, JP, 5-13 December 2002  |                |
|   | R                     | Marpe, Detlev and Hans L. Cycon; "Very Low Bit - Rate Video Coding Using Wavelet - Based Techniques"; IEEE Transactions on Circuits and Systems for Video Technology; Vol. 9, No. 1, Feb 1999.  |                |
|   | S                     | Heising, G., et al; "Wavelet-based very low Bitrate coding using image warping"; IEE Proc.-Vis. Image Signal Process, Vol 148, No 2, April 2001   |                |
| V   | T                     | Choi, Seung-Jong, and John W. Woods; "Motion-Compensated 3-D Subband Coding of Video"; IEEE Transactions on Image Processing, VOL 8, No. Feb. 1999  |                |

|                    |                    |                 |        |
|--------------------|--------------------|-----------------|--------|
| Examiner Signature | <i>B. H. Young</i> | Date Considered | 4/7/05 |
|--------------------|--------------------|-----------------|--------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

|   |                        |                          |                      |
|---|------------------------|--------------------------|----------------------|
| Substitute for form 1449/PTO  |                        | <b>Complete if Known</b> |                      |
| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br>(Use as many sheets as necessary) |                        | Application Number       | 10/623,096           |
|   |                        | Filing Date              | 7/17/2003            |
|   |                        | First Named Inventor     | Marpe, et al.        |
|   |                        | Art Unit                 | <del>2613</del> 2819 |
|   |                        | Examiner Name            | Unknown Young        |
| Sheet 3 of 6  | Attorney Docket Number | SCHO0151                 |                      |

| OTHER PRIOR ART—NON PATENT LITERATURE DOCUMENTS |                       |   |                |
|---|-----------------------|---|----------------|
| Examiner Initials*                              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
| Bh  | U                     | Said, Amir and William A. Pearlman; "A new fast and efficient image codec based on set partitioning in hierarchical trees"; IEEE Int. Symp on Circuits and Systems, Chigcago, IL May 1993   |                |
|   | V                     | Marpe, Detlev and Hans L. Cycon; "Efficient Pre-Coding Techniques for Wavelet-Based Image Compression"; Proc. Int. Picture Coding Symposium, pp. 45-50, 1997<br>(no month given)  |                |
|   | W                     | Rissanen, Jorma and Glen G. Landgon, Jr; "Universal Modeling and Coding"; IEEE Transactions on Information Theory; Vol. It-27, No. 1, January 1981  |                |
|   | X                     | Rissanen, Jorma; "Universal Coding, Information, Prediction, and Estimation"; IEEE Transactions on Information Theory; Vol. It-30, No. 4, July 1984   |                |
|   | Y                     | Weinberger, Marcelo J., et al; "Applications of universal context modeling to lossless compression of grey-scale images"; IEEE Transactions on Imaging Processing; Vol. 5, No. 4, April 1996  |                |
|   | Z                     | Teuhola, Jukka; "A Compression Method of Clustered Bit-Vektors"; Information Processing Letters, Vol 7, Number 6, pp. 308-311, October 1978   |                |
|   | AA                    | Gallager, Robert G. and David C. Van Voorhis; "Optimal Source Codes for Geometrically Distributed Integer Alphabets"; IEEE Transactions on Information Technology; pp 228-230, March 1975   |                |
|   | AB                    | Mrak, Marta, et al.; "A Context Modeling Algorithm and its Application in Video Compression"; Fraunhofer-Institute HHI, Berlin, Germany<br>(no date given)  |                |
|   | AC                    | Pennebaker, W.B., et al; "An overview of the basic principles of the Q-Coder adaptive binary arithmetic coder"; IBM. J. Res. Develop, Vol 32, No. 6, November 1988  |                |
| ✓   | AD                    | Rissanen, Jorma and K. M. Mohiuddin; "A multiplication-free multialphabet arithmetic code"; IEEE Transactions on Communications; Vol. 37, No. 2, February 1989  |                |

|                    |                          |                 |        |
|--------------------|--------------------------|-----------------|--------|
| Examiner Signature | <i>R. K. [Signature]</i> | Date Considered | 4/7/05 |
|--------------------|--------------------------|-----------------|--------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

|  |      |                          |                      |
|--|------|--------------------------|----------------------|
| <b>Substitute for form 1449/PTO</b><br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br>(Use as many sheets as necessary) |      | <b>Complete If Known</b> |                      |
|  |      | Application Number       | 10/623,096           |
|  |      | Filing Date              | 7/17/2003            |
|  |      | First Named Inventor     | Marpe, et al.        |
|  |      | Art Unit                 | 2615 2819            |
|  |      | Examiner Name            | Unknown <i>Youny</i> |
| Sheet 4  | of 6 | Attorney Docket Number   | SCHO0151             |

| OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS |                       |   |                |
|---|-----------------------|---|----------------|
| Examiner Initials*                              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
| <i>Blr</i>                                      | AE                    | Howard, Paul G. and Jeffrey Scott Viter; "Practical implementations of arithmetic code"; Brown University, Department of Computer Science, Technical Report No. 92-18; Revised version, April 1992, Formerly Technical Report No. CS-91-45.                     |                |
|   | AF                    | "Sample Data Coding"; Chapter 12, pp. 473-484<br><i>(no date given)</i>   |                |
|   | AG                    | Moffat, Alistair, et al; "Arithmetic Coding Revisited"; ACM Transactions on Information Systems, Vol 16, No. 3, pages 256-294, July 1998  |                |
|   | AH                    | Wiegand, Thomas, et al; "Rate-Constrained Coder Control and Comparison of Video Coding Standards"; IEEE Transactions on Circuits and Systems for VideoTechnology; Vol. 13, No. 7, July 2003   |                |
|   | AI                    | Wiegand, Thomas; "Draft ITU-T Recommendation and Final Draft International Standard of Joint Video Specification (ITU-T Rec. H.264; ISO/IEC 14496-10 AVC)"; Document: JVT-G050; 7th Meeting: Pattaya, Thailand, 7-14 March 2003                                 |                |
|   | AJ                    | "Video Codec For Audiovisual Services at p*64 kbit/s"; International Telecommunication Union; H.261 (03/93)   |                |
|   | AK                    | Wenger, Stephen; "H.264/AVC Over IP"; IEEE Transactions on Circuits and Systems for VideoTechnology; Vol. 13, No. 7, July 2003  |                |
|   | AL                    | Stockhammer, Thomas, et al; "H.264/AVCinWireless Environments"; IEEE Transactions on Circuits and Systems for VideoTechnology; Vol. 13, No. 7, July 2003  |                |
|   | AM                    | Wedi, Thomas and Hans Georg Musmann; "Motion-and Aliasing-Compensated Prediction for Hybrid Video Coding"; IEEE Transactions on Circuits and Systems for VideoTechnology; Vol. 13, No. 7, July 2003   |                |
| <i>✓</i>  | AN                    | Wiegand, Thomas, et al; "Long Term Memory Motion-Compensated Prediction"; IEEE Transactions on Circuits and Systems for VideoTechnology; Vol. 9, No. 1, Feb. 1999   |                |

|                    |                          |                 |        |
|--------------------|--------------------------|-----------------|--------|
| Examiner Signature | <i>B. K. [Signature]</i> | Date Considered | 4/7/05 |
|--------------------|--------------------------|-----------------|--------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

|  |      |                          |               |
|--|------|--------------------------|---------------|
| <b>Substitute for form 1449/PTO</b><br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br>(Use as many sheets as necessary) |      | <b>Complete if Known</b> |               |
|  |      | Application Number       | 10/623,096    |
|  |      | Filing Date              | 7/17/2003     |
|  |      | First Named Inventor     | Marpe, et al. |
|  |      | Art Unit                 | 2613 2819     |
|  |      | Examiner Name            | Unknown Young |
| Sheet 5  | of 6 | Attorney Docket Number   | SCHO0151      |

| OTHER PRIOR ART—NON PATENT LITERATURE DOCUMENTS |                       |   |                |
|---|-----------------------|---|----------------|
| Examiner Initials*                              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
| B4  | AO                    | Flierl, Markus, et al; "A locally design algorithm block-based multi-hypothesis motion-compensated prediction"; Proceedings of the IEEE DCC, pp. 239-248, Snowbird, Utah; March 1988  |                |
|   | AP                    | Flierl, Markus and Bernd Girod; "Generalized B Pictures and the Draft H.264/AVC Codec"; IEEE Transactions on Circuits and Systems for VideoTechnology; Vol. 13, No. 7, July 2003  |                |
|   | AQ                    | Wiegand, Thomas, et al; "Rate-Constrained Coder Control and Comparison of Video Coding Standards"; IEEE Transactions on Circuits and Systems for VideoTechnology; Vol. 13, No. 7, July 2003   |                |
|   | AR                    | Karczewicz, Marta and Ragip Kurceren; "The SP – and SI – Frames Design for H.264/AVC"; IEEE Transactions on Circuits and Systems for VideoTechnology; Vol. 13, No. 7, July 2003   |                |
|   | AS                    | Marpe, Detlev et al; "Context-Based Adaptive Binary Arithmetic Coding in the H.264/AVC Video Compression Standard"; IEEE Transactions on Circuits and Systems for VideoTechnology; Vol. 13, No. 7, July 2003  |                |
|   | AT                    | Malvar, Henrique S. et al; "Low-complexity Transformed Quantization in H.264/AVC"; IEEE Transactions on Circuits and Systems for VideoTechnology; Vol. 13, No. 7, July 2003   |                |
|   | AU                    | List, Peter, et al; "Adaptive Deblocking Filter"; IEEE Transactions on Circuits and Systems for VideoTechnology; Vol. 13, No. 7, July 2003  |                |
|   | AV                    | Ribas-Cobera, Jordi et al; "A Generalized Hypothetical Reference Decoder for H.264/AVC"; IEEE Transactions on Circuits and Systems for VideoTechnology; Vol. 13, No. 7, July 2003   |                |
|   | AW                    | Marpe, Detlev et al; "Proposed Editorial Changes and Cleanup of CABAC"; Joint Video Team of ISO/IEC MPEG & ITU-T VCEG; Document JVT-D019; 4th Meeting: Klagenfurt, Austria. 22-26 July 2002   |                |
|   | AX                    | Wiegand, Thomas; "Study of Final Committee Draft of Joint Video Specification (ITU-T Rec. H.264, ISO/IEC 14496-10 AVC0)"; Joint Video Team of ISO/IEC MPEG & ITU-T VCEG; Document JVT-F100d2; 6th Meeting: Awaji, Island, JP, 5-13 December 2002                |                |

|                    |  |                 |        |
|--------------------|--|-----------------|--------|
| Examiner Signature |  | Date Considered | 4/7/05 |
|--------------------|--|-----------------|--------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

|   |      |                          |               |
|---|------|--------------------------|---------------|
| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br>(Use as many sheets as necessary) |      | <b>Complete if Known</b> |               |
|   |      | Application Number       | 10/623,096    |
|   |      | Filing Date              | 7/17/2003     |
|   |      | First Named Inventor     | Marpe, et al. |
|   |      | Art Unit                 | 2613          |
|   |      | Examiner Name            | Unknown       |
| Sheet 6   | of 6 | Attorney Docket Number   | SCHO0151      |

| OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS |                       |   |                |
|---|-----------------------|---|----------------|
| Examiner Initials*                              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
| PS  | AY                    | Wiegand, Thomas: "Study of Final Committee Draft of Joint Video Specification (ITU-T Rec. H.264, ISO/IEC 14496-10 AVC0)"; Joint Video Team of ISO/IEC MPEG & ITU-T VCEG; Document JVT-F100; 6th Meeting: Awaji, Island, JP, 5-13 December 2002                  |                |
| J   | AZ                    | The Concept of a Random Variable, pages 82-84.<br>(no date given)   |                |
| J   | BA                    | Marpe, Detlev, et al; "Fast Arithmetic Coding for CABAC"; Joint Video Team of ISO/IEC MPEG & ITU-T VCEG; Document JVT-C061; 3rd Meeting: Fairfax, Virginia, USA, 6-10 March 2002.   |                |
|   |                       |   |                |
|   |                       |   |                |
|   |                       |   |                |
|   |                       |   |                |
|   |                       |   |                |
|   |                       |   |                |
|   |                       |   |                |
|   |                       |   |                |
|   |                       |   |                |

|                    |  |                 |        |
|--------------------|--|-----------------|--------|
| Examiner Signature |  | Date Considered | 4/7/05 |
|--------------------|--|-----------------|--------|

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.  
This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

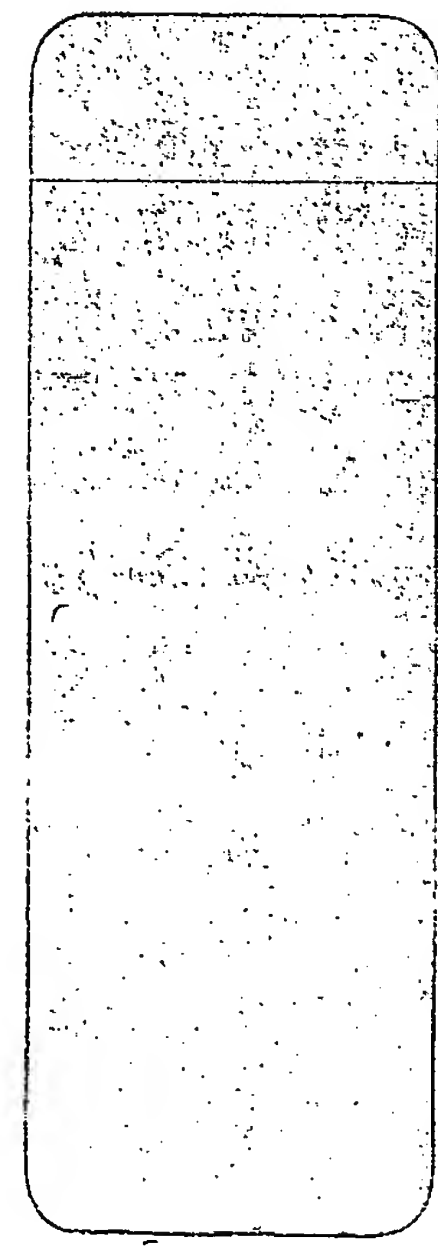
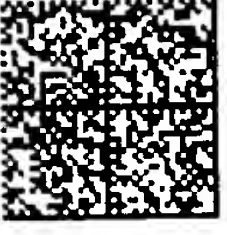
If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



Organization **IC2800** - Jeff  
U. S. DEPARTMENT OF COMMERCE  
COMMISSIONER FOR PATENTS  
P.O. BOX 1450  
ALEXANDRIA, VA 22313-1450  
IF UNDELIVERABLE RETURN IN TEN DAYS  
OFFICIAL BUSINESS

RETURNED TO SENDER  
**REASON CHECKED**  
Undelivered ☐ Refused ☐  
Addressee Unknown ☒  
Insufficient Address ☐ Number ☐  
No Such Street ☐ No Such Office in State ☐  
**POSTAGE GUARANTEED**

U.S. OFFICIAL MAIL  
PENALTY FOR  
PRIVATE USE \$300  
UNITED STATES POSTAGE  
02 1A \$00.83  
0004204055 APR 18 20  
MAILED FROM ZIP CODE 223



**RECEIVED**  
MAY 03 2005  
USPTO MAIL CENTER

